

REMARKS

Claims 17-18 and 22-27 are pending in this application. Claims 17 and 22 have been amended in several particulars for purposes of clarity and brevity that are unrelated to patentability and prior art rejections while Claims 25-27 have been newly added in accordance with current Office policy, to further and alternatively define Applicants' disclosed invention and to assist the Examiner to expedite compact prosecution of the instant application.

Claims 17-18 have been allowed without the necessity of amendment. The Examiner's indication of allowability of these claims is noted with appreciation. Claims 17-18, as allowed, have been carefully reviewed and revised to provide proper antecedent basis for a term defined in order to place the application in condition for allowance.

Claims 22-24 have been rejected under 35 U.S.C. §112, 2d ¶, as being indefinite. Specifically, the Examiner asserts that there is insufficient antecedent basis for the term "the outputs of the phase difference detector" in base claim 22. In response thereto, base claim 22 has been amended to overcome this rejection.

Claims 22 and 24 have been rejected under 35 U.S.C. §102(b) as being anticipated by Hachi (JP 07-296395 - machine translation) for reasons stated on page 3 of the Office Action (Paper No. 110105). In support of the rejection of Applicants' base claim 22, the Examiner asserts that Hachi '395 discloses a tracking error detecting apparatus, as shown in FIG. 2, including among others, "a plurality of phase locked loops (16A, 16B; See paragraph 0028, lines 3-4) which each generate clock signals synchronized with each of the outputs of the plurality of binarizers; a phase difference detector (16A, 16B; see paragraph 0028, lines 1-2) which detects a phase difference between the generated clocks signals from the plurality of phase locked loops."

However, the Examiner's assertion is factually incorrect. Elements 16A-16B, as shown in FIG. 2 of Hachi '395 are **not** and cannot be interpreted to represent two discrete components, both the "plurality of phase locked loops" and the "phase difference detector" as expressly defined in Applicants' base claim 22 at the same time.

As described in the cited paragraph [0028] of Hachi '395, elements 16A-16B are "phase comparators" used to receive signals from a series of level comparators 14A, 14B, 14C, 14D in order to detect a phase difference between those received signals. Such a phase difference is then fed to a differential operating circuit 19 to obtain a tracking error signal. Hachi '395 further

identifies that the "phase comparators 16A-16B" are in fact a phase detector that is of a type used for phase locked loop (PLL). However, Hachi '395 never describes that the "phase comparators 16A-16B" are in fact phase locked loops (PLLs) as seemingly suggested by the Examiner. Of course, phase comparators are a completely different circuit from that of phase locked loops (PLLs). As such, phase comparators as described by Hachi '395 is **not** and **cannot** be interpreted broadly to cover Applicants' two discrete circuit components, i.e., PLLs and phase comparators, as defined in Applicants' base claim 22.

More importantly, there is **no** disclosure anywhere from Hachi '395 of Applicants' use of PLLs to generate clock signals synchronized with each of outputs of the binarizers, and a phase difference detector to detect a phase difference between the synchronized clock signals output from the PLLs in an effort to obtain a tracking error signal, as defined in Applicants' base claim 22.

Likewise, there is **no** disclosure or suggestion anywhere from Hachi '395 of Applicants' unique effect of obtaining a tracking error signal with a large gain by using the PLLs, as defined in Applicants' base claim 22.

The rule under 35 U.S.C. §102 is well settled that anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. In re Paulsen, 30 F.3d 1475, 31 USPQ2d 1671 (Fed. Cir. 1994); In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990). Those elements must either be inherent or disclosed expressly and must be arranged as in the claim. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989); Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 7 USPQ2d 1057 (Fed. Cir. 1988); Verdegall Bros., Inc. v. Union Oil Co., 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). In addition, the prior art reference must be enabling. Akzo N.V. v. U.S. International Trade Commission, 808 F.2d 1471, 1479, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986), cert. denied, 482 U.S. 909 (1987). The corollary of that rule is that absence from the reference of any claimed element negates anticipation. Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 230 USPQ2d 81 (Fed. Cir. 1986).

The burden of establishing a basis for denying patentability of a claimed invention rests upon the Examiner. The limitations required by the claims cannot be ignored. See In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). All claim limitations, including those which are functional, must be considered. See In re Oelrich, 666 F.2d 578, 212 USPQ 323 (CCPA 1981).

Hence, all words in a claim must be considered in deciding the patentability of that claim against the prior art. Each word in a claim must be given its proper meaning, as construed by a person skilled in the art. Where required to determine the scope of a recited term, the disclosure may be used. See In re Barr, 444 F.2d 588, 170 USPQ 330 (CCPA 1971).

In the present situation, Hachi '395 fails to disclose and suggest key features Applicants' base claim 22. Therefore, Applicants respectfully request that the rejection of claims 22 and 24 be withdrawn.

Claim 23 has been rejected under 35 U.S.C. §103 as being unpatentable over Hachi in view of Sugimoto et al., U.S. Patent No. 5,978,322. In support of this rejection, the Examiner admits that Hachi '395 does **not** disclose the use of equalizers, but cites FIG. 1, element 23 of Sugimoto '322 for providing motivation to incorporate such equalizers into the apparatus of Hachi '395 in order to arrive at Applicants' claim 23. However, in view of the noted deficiencies of Hachi '395, any effort to incorporate the subject matter of Sugimoto '322 will also not arrive at Applicants' claim 23, primarily for the same reasons discussed above. As previously discussed, there is **no** disclosure or suggestion anywhere from Hachi '395 of Applicants' use of PLLs to generate clock signals synchronized with each of outputs of the binarizers, and a phase difference detector to detect a phase difference between the synchronized clock signals output from the PLLs in an effort to obtain a tracking error signal, and, likewise, of Applicants' unique effect of obtaining a tracking error signal with a large gain by using the PLLs, as defined in Applicants' base claim 22.

Claims 25-27 have been newly added to alternatively define Applicants' disclosed invention over the prior art of record. These claims are believed to be allowable at least for the same reasons discussed against all the outstanding rejections of the instant application. No fee is incurred by the addition of claims 25-27.

In view of the foregoing amendments, arguments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. Should any questions remain unresolved, the Examiner is requested to telephone Applicants' attorney at the Washington DC office at (202) 216-9505 ext. 232. Applicants respectfully reserve all rights to file subsequent related application(s) (including reissue applications) directed to any or all previously claimed limitations/features which have been amended or canceled, or to any or all limitations/features not yet claimed, i.e., Applicants have no intention or desire to dedicate or surrender any limitations/features of the disclosed invention to the public.

To the extent necessary, Applicants petition for an extension of time under 37 CFR §1.136. If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN, MCEWEN & BUI, LLP

Date: 2/21/06

By: Hung H. Bui
Hung H. Bui
Registration No. 40,415

1400 Eye St., NW
Suite 300
Washington, D.C. 20005
Telephone: (202) 216-9505
Facsimile: (202) 216-9510